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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

EDWARDS, LAURA ESTELLE

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 11/19/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

8W-17

Office Action SummaryApplication No.
09/133,989

Applicant(s)

Doan

Examiner
Laura EdwardsArt Unit
1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 4, 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-33 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 14 20) ☐ Other:

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Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 12-14 and 17-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (JP 8-5825) in view of Matsumura (JP 5-175117) or Isono (JP2-157763) as set forth in the previous office action.

Claims 14-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al (JP 56-73579) in view of Honda (JP 8-5825).

Claims 14-19 and 21-33 remain rejected for the reasons set forth in the previous office action.

With respect to (thrice amended) claim 20, Uchida et al teach a negative pressure device (5) defining a vacuum area on one side of substrate and a solvent or water dispenser intersecting the vacuum area and aligned with an edge of the substrate while the substrate (12) is moved relative to the negative pressure device. Uchida et al fail to teach or suggest the vacuum area on more than one side of the wafer while the substrate is moved relative to the negative pressure device. However, it was known in the art at the time the invention was made, to provide a vacuum mechanism on more than one side of a wafer to facilitate the removal of coating build-up on the edge of a substrate from its top and bottom surface as evidenced by Honda (see Figs. 2

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and 3). Therefore, it would have been obvious to one of ordinary skill in the art to provide in the Uchida et al device, a vacuum mechanism on more than one side of the wafer as taught by Honda, in order to optimize the removal of coating build-up from upper and lower surfaces of the substrate.

Response to Arguments

Applicant's arguments filed 9/4/01 have been fully considered but they are not persuasive.

Applicant contends that the obviousness combination of Honda and Matsumura is improper because 1) one of ordinary skill in the art would not use Matsumura's solvent in Honda's developing process, 2) Matsumura teaches a fast spray process and Honda a slower drip dispensing process, 3) Matsumura teaches a more complex apparatus and Honda less complex apparatus such that combination is improper, and 4) hindsight was used to result in the combination.

Applicant's first argument is not deemed persuasive because one of ordinary skill in the art would use an appropriate solvent of Matsumura in the Honda apparatus for removing an edge bead from the photoresist coated substrate. The specific solvent(s) used in the Honda apparatus would be determined in accordance with the coated substrate being treated. Both Honda and Matsumura teach apparatus used in the production of color filters with photosensitive or photoresist type compositions and removal of an edge bead therefrom using a liquid to remove

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the edge bead (See the translations provided by Applicant, for Honda, see page 2-Application item and page 4, paragraph 009, for Matsumura see page 3, paragraph 001).

Applicant's second argument is not deemed persuasive because it is irrelevant as to how the Honda and Matsumura apparatus dispense the liquid on the substrate. Furthermore, Matsumura has not been applied for the purpose of how the solvent is dispensed but that it is well established in the art to use a solvent to remove an edge bead from a coated substrate, namely, a photoresist coated substrate.

Applicant's third argument is not deemed persuasive because it is irrelevant as to the complexity of the Honda and Matsumura apparatus because the degree of complexity of structure is not claimed.

Applicant's fourth argument is not deemed persuasive because it must be recognized that any judgement on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Applicant's disclosure, such a reconstruction is proper. *In re McLaughlin*, 443 F.2d 1392; 170 USPQ 209 (CCPA 1971).

Applicant contends that the obviousness combination of Honda and Isono is improper because 1) one of ordinary skill in the art would not use Isono's solvent in Honda's developing process, 2) Honda's processing device defines an opening such that the housing is distal from the

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substrate while Isono's is the exact opposite, and 3) hindsight was used to result in the combination.

The first argument is not deemed persuasive because one of ordinary skill in the art would use a solvent as taught by Isono in the Honda apparatus for the purpose of removing an edge bead from the coated glass substrate. Isono recognizes using a solvent to remove a resist coating from a glass substrate and further that the glass substrate is used in liquid crystal displays (see Isono translation- page 4, last paragraph to lines 1 and 2 of page 5). Honda teaches making a filter which is used in a liquid crystal display panel (see Honda translation- page 2, paragraphs 0001 to 0002). The specific solvent(s) used in the Honda apparatus would be determined in accordance with the coated substrate being treated.

The second argument is not deemed persuasive because it is irrelevant as to how Isono's housing is disposed with respect to the substrate. Isono has been applied in the rejection with Honda for the sole purpose of teaching that the routineer in the art would recognize using a solvent to remove an edge bead resist coating from a substrate.

The third argument is not deemed persuasive for reasons set forth above (See *In re McLaughlin*).

Applicant contends that the obviousness combination of Uchida with Honda is improper because 1) the Examiner failed to consider the references as a whole, 2) the Examiner mischaracterized Uchida, 3) the Examiner has made assumptions as to what is conventional in the

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art and has failed to provide adequate support for what is conventional, 4) the Examiner's motivation for the combination of Uchida with Honda is refuted by Uchida, 5) the Examiner's deeming of what is the level of ordinary skill in the art is untenable, and 6) it is questionable as to whether Uchida is a viable reference in the obviousness rejection.

The first argument is not deemed persuasive because the Examiner has looked at the references as a whole in that both recognize usage of a combined suction and dispensing apparatus to remove coating build-up from the edge of a coated substrate.

The second argument is not deemed persuasive because the Examiner has not mischaracterized Uchida. The Examiner recognizes that the Uchida apparatus can be placed into contact with the coating material, however, the user fixes the apparatus into place. The Examiner contends that positioning the Uchida nozzle with respect to the substrate and the coating thereon is within the level of ordinary skill in the art. Spacing the apparatus above the coating material does not structurally modify the Uchida apparatus but does change how the apparatus is positioned or manipulated by the user. Uchida recognizes that apparatus is manipulated because it is fixed into position [by the user] (see second translation, fax p. 1, last paragraph, lines 3-5). There is no structure in Uchida that makes the apparatus contact the coating on the substrate with the exception of how the user positions the apparatus with respect to the substrate.

The third argument is not deemed persuasive because the Examiner has made no assumptions without backup of evidence which is clearly set forth in the references cited by the Examiner.

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The fourth argument is not deemed persuasive because the motivation for the combination is well founded and not refuted by Uchida. The motivation for the combination is reasonable and just plain common sense. Uchida does allude to solving a cleaning/clogging problem with his invention, however, one of ordinary skill in the art would expect that the problem to be better solved by spacing the apparatus above the coated substrate. The routineer in the art would know that spacing or manipulating or positioning the apparatus above the coated substrate would be even better to keep in with the goal of minimizing the need of the constant cleaning and this is evidenced by Honda.

The fifth argument is not deemed persuasive as the Examiner has well established what is within the level of ordinary skill in the art as evidenced by the teachings of Uchida and Honda.

The sixth argument is not deemed persuasive because Uchida is a viable reference in the rejection for the reasons set forth in the previous office action.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. Edwards whose telephone number is (703) 308-4252. The examiner can normally be reached on Monday-Thursday from 8:30AM-6:00PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino, can be reached at (703) 308-3853. The fax phone number for Art Unit 1734 is (703) 305-7115.

Any inquiry of a general nature such as status inquiries should be directed to the Group receptionist whose telephone number is (703) 308-0661.

le
November 14, 2001


LAURA EDWARDS
PRIMARY EXAMINER